

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



re Application of:
Marshall S. Runge et al.

Serial No.: 09/832,096

Filed: April 10, 2001

For: MITOCHONDRIAL DNA DAMAGE AS
A PREDICTOR OF CORONARY
ATHEROSCLEROTIC HEART DISEASE

Group Art Unit: 1634

Examiner: Jeanine Anne Goldberg

Atty. Dkt. No.: CLFR:183US

CERTIFICATE OF MAILING
37 C.F.R 1.8

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July 1, 2005

Date

David L. Parker

INFORMATION DISCLOSURE STATEMENT

MS AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R. §§ 1.97(g), (h), this Information Disclosure Statement is not

to be construed as a representation that a search has been made, and is not to be construed to be

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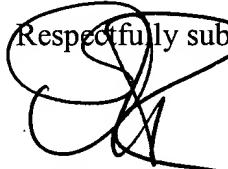
an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

This application is a continuation-in-part of US patent application serial No. 09/231,093 filed January 14, 1999 now issued as patent No. 6,322,974 and is relied upon for an earlier filing date under 35 U.S.C. § 120. only copies of those documents not previously cited and submitted to the Patent and Trademark Office in prior application Serial No. 09/231,093 are enclosed for the convenience of the Examiner.

A fee as set forth in 37 C.F.R. § 1.17(p) in the amount of \$180.00 is enclosed herewith. If an appropriate check has not been enclosed, or if it is insufficient, the Commissioner is authorized to deduct the appropriate fee from Fulbright & Jaworski Account No.: 50-1212/CLFR:183US.

Applicants respectfully request that the listed documents be made of record in the present case.

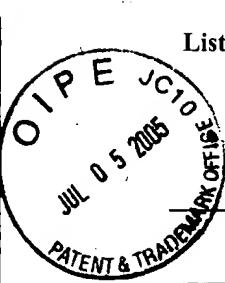
Respectfully submitted,



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Date: July 1, 2005



Form PTO-1449 (modified)		Atty. Docket No. CLFR:183US	Serial No. 09/832,096 069
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT <small>(Use several sheets if necessary)</small>			
U.S. Patent Documents <i>See Page 1</i>		Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Adachi <i>et al.</i> , "A deletion of mitochondrial DNA in murine doxorubicin-induced cardiotoxicity," <i>Biochem Biophys Res Commun</i> , 195(2):945-951, 1993.
	C2	Andreassi, "Coronary atherosclerosis and somatic mutations: an overview of the contributive factors for oxidative DNA damage," <i>Mutation Research</i> , 543:67-86, 2003.
	C3	Attardi <i>et al.</i> , "New insights into the mechanisms of RNA synthesis and processing in human mitochondria," In: <i>Achievements and Perspectives of Mitochondrial Research</i> , eds Qkuagliarello <i>et al.</i> , Elsevier Science, NY, 145-163, 1985.
	C4	Ballinger <i>et al.</i> , "Hydrogen peroxide- and peroxynitrite-induced mitochondrial DNA damage and dysfunction in vascular endothelial and smooth muscle cells," <i>Circulation Research</i> , 86:960-966, 2000.
	C5	Ballinger <i>et al.</i> , "Mitochondrial genome damage associated with cigarette smoking," <i>Cancer Res.</i> , 56(24):5692-5697, 1996.
	C6	Ballinger <i>et al.</i> , "Maternally transmitted diabetes and deafness associated with a 10.4 kb mitochondrial DNA deletion," <i>Nature Genet</i> , 1(1):11-15, 1992.
	C7	Ballinger <i>et al.</i> , "Mitochondrial integrity and function in atherogenesis," <i>Circulation</i> , 106:554-549, 2002.
	C8	Bandy <i>et al.</i> , "Mitochondrial mutations may increase oxidative stress: implications for carcinogenesis and aging?" <i>Free Rad Biol Med</i> , 8(6):523-539, 1990.

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EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. CLFR:183US	Serial No. 09/832,896-669
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marschall S. Runge <i>et al.</i>	
		Filing Date: April 10, 2001	Group: 1634
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Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C9	Bason <i>et al.</i> , "Interaction of antibodies against cytomegalovirus with heat-shock protein 60 in pathogenesis of atherosclerosis," <i>The Lancet</i> , 362:1971-1977, 2003.
	C10	Berg <i>et al.</i> , "A new sensitive bioassay for precise quantification of interferon activity as measured via the mitochondrial dehydrogenase function in cells (MTT-method)," <i>APMIS</i> , 98:152-162, 1990.
	C11	Bindoli, "Lipid peroxidation in mitochondria," <i>Free Rad Biol Med</i> , 5(4):247-261, 1988.
	C12	Blanc <i>et al.</i> , "Protective role of uncoupling protein 2 in atherosclerosis," <i>Circulation</i> , 107:388-390, 2003.
	C13	Chen <i>et al.</i> , "Senescence-like growth arrest induced by hydrogen peroxide in human diploid fibroblast F65 cells," <i>Proc. Natl. Acad. Sci., USA</i> , 91:4130-4134, 1994.
	C14	Christianson <i>et al.</i> , "A tridecamer DNA sequence supports human mitochondrial RNA 3'-end formation in vitro," <i>Mol. Cell Biol.</i> , 8(10):4502-4509, 1988.
	C15	Christianson <i>et al.</i> , "In vitro transcription of human mitochondrial DNA: accurate termination requires a region of DNA sequence that can function bidirectionally," <i>Proc. Natl. Acad. Sci., USA</i> , 83(17):6277-6281, 1986.
	C16	Cortopassi <i>et al.</i> , "Detection of a specific mitochondrial DNA deletion in tissues of older humans," <i>Nucleic Acids Research</i> , 18(23):6927-2933, 1990.
	C17	Darley-Usmar <i>et al.</i> , "The simultaneous generation of superoxide and nitric oxide can initiate lipid peroxidation in human low density lipoprotein," <i>Free Radical Res Commun</i> , 17:9-20, 1992.
	C18	Diaz <i>et al.</i> , "Antioxidants and atherosclerotic heart disease," <i>New England Journal of Medicine</i> , 337(6):408-416, 1997.
	C19	Doerson <i>et al.</i> , "Characterization of an Rnase P activity from HeLa cell mitochondria. Comparison with the cytosol Rnase P activity," <i>J. Biol. Chem.</i> , 260(10):5942-5949, 1985.
	C20	Ferrari <i>et al.</i> , "Oxygen-mediated myocardial damage during ischaemia and reperfusion: role of the cellular defences against oxygen toxicity," <i>J Mol Cell Cardiol</i> , 17:937-945, 1985.
	C21	Finkel and Holbrook, "Oxidants, oxidative stress and the biology of ageing," <i>Nature</i> , 408:239-2447, 2000.

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	C22	Fossei <i>et al.</i> , "Cell death induced by peroxidized low-density lipoprotein: endopepsis," <i>Cancer Res.</i> , 54(5):1240-1248, 1994.
	C23	Giulivi <i>et al.</i> , "Hydroxyl radical generation during mitochondrial electron transfer and the formation of 8-hydroxydeoxyguanosine in mitochondrial DNA," <i>Arch Biochem Biophys</i> , 316(2):909-916, 1995.
	C24	Goda <i>et al.</i> , "Modulation of mitochondrion-mediated oxidative stress by nitric oxide in human placental trophoblastic cells," <i>Am J Physiol</i> , 271:H1893-1899, 1996.
	C25	Graham <i>et al.</i> , "Peroxynitrate modification of low-density lipoprotein leads to recognition by the macrophage scavenger receptor," <i>FEBS Lett</i> , 330:181-185, 1993.
	C26	Heitzer <i>et al.</i> , "Endothelial dysfunction, oxidative stress, and risk of cardiovascular events in patients with coronary artery disease," <i>Circulation</i> , 104:2673-2678, 2001.
	C27	Holland <i>et al.</i> , "Atherogenic levels of low-density lipoprotein increase hydrogen peroxide generation in cultured human endothelial cells: possible mechanism of heightened endocytosis," <i>J. Cell Phys</i> , 166(1):144-151, 1996.
	C28	Hruszkewyca, "Lipid peroxidation and mtDNA degeneration. A hypothesis," <i>Mut Res</i> , 275(3-6):243-248, 1992.
	C29	Huet <i>et al.</i> , "NADH-dependent dehydrogenase activity estimation by flow cytometric analysis of 3-(4,5-dimethylthiazolyl-2-yl)-2,5-diphenyltetrazolium bromide (MTT) reduction," <i>Cytometry</i> , 13(5):532-539, 1992.
	C30	Knight-Lozano <i>et al.</i> , "Cigarette smoke exposure and hypercholesterolemia increase mitochondrial damage in cardiovascular tissues," <i>Circulation</i> , 105:849-854, 2002.
	C31	Leibovitz <i>et al.</i> , "Neurodegeneration, myocardial injury, and perinatal death in mitochondrial superoxide dismutase-deficient mice," <i>Proc. Natl. Acad. Sci., USA</i> , 93:9782-9787, 1996.
	C32	Lippold, "Quantification succinic dehydrogenases histochemistry," <i>Histochemistry</i> , 76:381-405, 1982.
	C33	Malek <i>et al.</i> , "Hemodynamic shear stress and its role in atherosclerosis," <i>JAMA</i> , 282:2035-2042, 1999.
	C34	McCord, "Free radicals and myocardial ischemia: overview and outlook," <i>Free Rad Biol Med</i> , 4(1):9-14, 1988.

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	C35	Nomiyama <i>et al.</i> , "Accumulation of somatic mutation in mitochondrial DNA and atherosclerosis in diabetic patients," <i>Ann NY Acad Sci</i> , 1011:193-204, 2004.
	C36	Ojala <i>et al.</i> , "The tRNA genes punctuate the reading of genetic information in human mitochondrial DNA," <i>Cell</i> , 22(2 pt 2):393-403, 1980.
	C37	Ojala <i>et al.</i> , "tRNA punctuation model of RNA processing in human mitochondria," <i>Nature</i> , 29(5806):470-474, 1981.
	C38	Parthasarathy <i>et al.</i> , "Role of oxidized low density lipoprotein in atherogenesis," <i>Prog Lipid Res</i> , 31:127-143, 1992.
	C39	Sastre <i>et al.</i> , "Aging of the liver: age-associated mitochondrial damage in intact hepatocytes," <i>Hepatology</i> , 24(5):1199-1205, 1996.
	C40	Schauenstein and Hoffer-Bergthaler, "Zur cytospektrometrischen erfassung der succinodehydrogenase-aktivität mit dem MTT-reagens in isolierten zellen," <i>Monatshefte für Chemie</i> , 103:1271-1275, 1972.
	C41	Shigenaga <i>et al.</i> , "Oxidative damage and mitochondrial decay in aging," <i>Proc. Natl. Acad. Sci., USA</i> , 91:10771-10778, 1994.
	C42	Slater <i>et al.</i> , "Studies on succinate-tetrazolium reductase systems," <i>Biochim Biophys Acta</i> , , 77:383-393, 1963.
	C43	Sorescu <i>et al.</i> , Superoxide production and expression of nox family proteins in human atherosclerosis," <i>Circulation</i> , 105:r40-r46, 2002.
	C44	Steinberg <i>et al.</i> , "Is the oxidative modification hypothesis relevant to human atherosclerosis?" <i>Circulation</i> , 105:2107-2111, 2002.
	C45	Stöllberger and Finsterer, "Atherosclerosis: infection-induced involvement of mitochondrial chaperonins," <i>The Lancet</i> , 362:1949-1950, 2003.
	C46	Topper <i>et al.</i> , "Identification of vascular endothelial genes differentially responsive to fluid mechanical stimuli: cyclooxygenase-2, manganese superoxide dismutase, and endothelial cell nitric oxide synthase are selectively up-regulated by steady laminar shear stress," <i>Proc. Natl. Acad. Sci., USA</i> , 93:10417-10422, 1996.
	C47	Trounce <i>et al.</i> , "Decline in skeletal muscle mitochondrial respiratory chain function: possible factor in ageing," <i>Lancet</i> , 333(8639):637-639, 1989.

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Form PTO-1449 (modified)

Atty. Docket No.

Serial No.

CLFR:183US

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List of Patents and Publications for Applicant's

Applicant

Marschall S. Runge *et al.*

INFORMATION DISCLOSURE STATEMENT

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	C48	Williams <i>et al.</i> , "Increased oxidative damage is correlated to altered mitochondrial function in heterozygous manganese superoxide dismutase knockout mice," <i>J. Biol. Chem.</i> , 273(43):28510-28515, 1998.
	C49	Williams, "Canaries in the coal mine: mitochondrial DNA and vascular injury from reactive oxygen species," <i>Circulation Res.</i> , 86:915-916, 2000.
	C50	Yakes <i>et al.</i> , "PCR-based assays for the detection and quantification of DNA damage and repair," In: <i>Technologies for Detection of DNA Damage and Mutations</i> , Pfeifer ed, Plenum, NY, 169-182, 1996.
	C51	Yakes <i>et al.</i> , "Mitochondrial DNA damage is more extensive and persists longer than nuclear DNA damage in human cells following oxidative stress," <i>Proc. Natl. Acad. Sci., USA</i> , 94(2):514-519, 1997.
	C52	Zhang <i>et al.</i> , "The oxidative inactivation of mitochondrial electron transport chain components and ATPase," <i>J. Biol. Chem.</i> , 265(27):16330-16336, 1990.
	C53	Cadenas and Davies, "Oxidative inactivation and proteolytic degradation of mitochondrial proteins," <i>Free Radical Biology and Medicine</i> , 29:222-230, 2000. (Abstract Only)
	C54	Halmosi <i>et al.</i> , "Effect of poly(ADP-ribose) polymerase inhibitors on the ischemia-reperfusion-induced oxidative cell damage and mitochondrial metabolism in Langendorff heart perfusion system," <i>Mol. Pharmacol.</i> , 59(6):1497-1505, 2001.

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